Mastering the Arithmetic of Arms Control

The order in which weapons are dismantled will play a large role in easing—or maintaining—the tensions that hinder arms control. Cutting counterforce ICBMs first would facilitate further reductions.

By Albert Gore Jr.

President Reagan's speech at Eureka College Sunday instantly changed the nature of America's debate over strategic weapons and arms control Whether one agrees with his proposal or not, the fact must be recognized that be has now called for a resumption of talks with the Soviets and that he has laid down this country's official negotisting position. As a result, advocates of competing plans and approaches have a different role to play.

The proposal itself raises many questions. It is a call for U.S and Soviet forces to look rather like mirror-image twins, a resemblance that would be achieved by carving away at the many differences which presently distinguish

ane side from the other

In the first phase, the President wants sharp reductions to a point where both sides would have equal numbers of * arteads on an equal number of ballistic missiles (counting word the ground and sea-linusched varieties), with no more than half of those warheads to be based on land.

In the second phase, the President wants each side to have equal throw weight, at a figure lower than that for CLITED! U.S forces. (Throw-weight is a measure of bow big e payload of meapons missiles can loft from the United States to targets in the Soviet Union and vice versa.)

According to the President, these reductions would be made to achieve "stability through significant reductions in the most destabiliting nuclear systems, ballistic missiles and especially intercontinental ballistic missiles."

This statement is in line with a growing consensus among students of the nuclear weapons problem in this

country that the arma-montrol process must be targeted on the armalied TCBM vulnerability problem—a tangle of target and fears that is forcing both sides to deploy ever greater numbers of weapons in a search for safety. Beginning this is a problem that a force us rather than the Country this is a problem that a force us rather than

the Someu The exercical at the President currently fears

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is the Soviets muld use their advantages in size and number of ICBM missiles and warhards to destroy our ICFM siles and our bomber bases, and that it would take only a fraction of the Soviet Union's ICBM force to do so Were this to occur, the President would have a difficult

Were this to occur, the President would have a difficult chris to make If he and need a mislictor, and does Seviet cities, then the Seviet we pour held in means would be based upon American cities, then killing scores of millions of people—people who might be saved if the President decided to come to terms with the Soviets instead.

Many school analysis rojed this scenario. They deay that a first sinks against U.S. also—referred to as a counterfure acted lagainst the forces of the United Sister, as apposed to civilian targets—would ever look attractive to any same Soviet hader. But their arguments about the lagar of a first strike by the Soviet have been unable to dispet the foor of one. The reason for this is that mislands them also that such a strike is now at least mathematics. tions about that such a strike is now at least mathemat-

tions show that such a strike is now at least mathematically possible for the Sovieta.

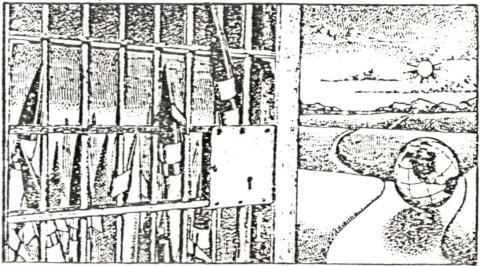
Our pleasars have responded to this problem he concluding that the President ought to have another option at his disposal what of fining counterforce missiles of our own at all the Soviet missiles held in reserve after their first writes then he would at least have an alternative to

Limit some then he would stilled have an encourage to annihilation or surrender.

As a result, we have here two weapons express under development that are designed to give the Provident and in police. They are the FO missile which is comently in pointissis of the In Courses because of factor that it could survive a Soviet attack, and the Trident B or D-5 missile and the survive as soviet attack, and the Trident B or D-5 missile as he was a factor of the real of the survive as soviet attack. male sunder a Seviet attack, and the Trident B or Dab missile, to be placed about the new Obserless submatines. Neither of these weapons is to be deployed until the end of the deadle, and until they are, we are said to have a window of submerability—vulnerability, that is, to mainide tion, here use we are the oretically open to the blackmail which might follow a first strike.

Because of their great accuracy, these new weapons are by nature counterforce weapons—capable of destroying Soviet (CPMs in their alles And because of the quantil

ing Soviet IC BMs in their allos And because of the quanti-



ty of these weapons that we are to deploy, they would exist in numbers great enough to earry out, in theory, a U.S. first strike against Soviet forces. So, as a side effect of our effort to close our window of vulnerability, we would be opening a window of vulnerability on the Soviets. Moreover, the Soviet window would be proportionately more serious for them. Our nuclear forces are relatively well spread among land, air- and son-based launchers, while the Soviets have concentrated almost 80 per cent of their nucies warbeads on land-based ballistic missiles.

But it is clearly not in our interest to open a Soviet window of vulnerability if our objective in all this is to reduce the chances of nuclear war. Unless we and the Soviets change from the path flown which we are besding, we will create a situation in which each side will have so much to lose if it besitates to act during a crisis that both sides will be forced to keep their nuclear forces on a hair-trigger alert, ready to be launthed at the first hint of an imminent attack from the other side. And it a political mais, fear may prompt a disastrous miscalculation. Once launched, ICBMs cannot be recalled.

As I said, the President's proposal begins with these

facts in mind, and purports to deal with them. However, the problem is that not all reductions are benign, and not all forms of equality lead to stability.

Stability is not something inherent in the strategic forces of either country, taken by themselves it depends instead on the relationship by tween the two forces and on how these forces tend to influence decision-making when

how these romes send to all the each other.

To assess the President's program, in other words, it is essential to know precisely how the forces of each side would look as they went through the two phases of his proposal. There are many paths that either side muld take and the President has understandably not spelled them out in his opening position. It is quite possible to realign the forces of both countries in a way that five his outline, but that leads not to more but to less suchility than before. Both sides mult be mirror images of each other, and both could exist in much smaller numbers. Yet, each aide might, depending on the mespons if chose to keep, still be us a position to launch a first strike against the other's ICEMs while retaining substantial force in reserve in the effermeth, the stacker would enjoy a substantial numerical advantage over the victim.

In other words, the President's formule can be worked out it a way that leads to the worst of all possible arrange ments: mutually vulnerable forces for both countries, poised always on a bair-frigger elect. Rough calculations I have done based on existing and oncoming U.S. and Soviet weapons show me that this muld indeed occur, and that it should be exasidered one of the more likely outcomes.

This is oboic us) an undesirable result and, presum-ably, one that the United States and the Soviet Union will by to avoid as both nations look for agreement it can

my it sword as both nations soon for agreement it can certainly be realded if both nations wish to avoid it. The key to a successful agreement must be the elimina-tion of even the theoretical possibility of a strategic first strike by either side. It does no good to offset a Soviet capability of this sor, with one of our own. The fear of a first

both sides, I proposed in March a set of detailed guidelines for a strategit agreement—a proposal that had counterforce weapons as its focus. Like the President's, this pro-posal has two phases.

The first phase would be a selective freeze on any addi-

tions to the counterforce inventory of either side and on any improvements to counterforce weapons run ently de-ployed. This might also be described as a "begotistors" piopen, and might also be described from to the negotiators pause, designed to give breathing room to the negotiators by slowing the momentum of technical development at the cutting edge of the arms race.

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